



LAWN AND LEAF SWEEPER

Model 98197

ASSEMBLY, OPERATING, AND MAINTENANCE INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.

Due to continuing improvements, actual product may differ slightly from the product described herein.

Distributed exclusively by Harbor Freight Tools®.

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**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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For technical questions or replacement parts, please call 1-800-444-3353.

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INSTRUCTIONS

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous

situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a

hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.


WARNING

When using Lawn and Leaf

Sweepers, basic safety precautions should always be followed to reduce the risk of personal injury, including the following:

READ ALL INSTRUCTIONS

Personal Safety

1. Dress Properly - Do not wear loose clothing or jewelry. They can be caught in moving parts. Wearing of long pants is recommended. Wear protective hair covering to contain long hair.
2.  Wear ANSI-approved safety goggles and heavy-duty work gloves. Use face or dust mask if operation is dusty.
3. Read and adhere to all safety instructions provided by the manufacturer of the riding mower or the tractor that the Lawn Sweeper will be attached to.
4. Do not Overreach - Keep proper footing and balance at all times.
5. Stay Alert - Watch what you are doing. Use common sense. Do not op-

erate Lawn and Leaf Sweeper when you are tired.

6.



Wear steel toed work boots to help prevent injury caused by flying debris.

Lawn and Leaf Sweeper Use and Care

1. Avoid Dangerous Environment - Do not use Lawn and Leaf Sweepers in extremely wet or flooded locations.
2. Keep Children Away - All visitors should be kept at a distance from work area.
3. When servicing use only identical replacement parts.
4. Use this product in the right application - Do not use Lawn and Leaf Sweeper for any job except that for which it is intended.
5. Do not Force Lawn and Leaf Sweeper - It will do the job better at the rate for which it was designed.
6. When not in use, Lawn and Leaf Sweeper should be stored indoors in a dry location that is out of reach of children.
7. Maintain Lawn and Leaf Sweeper with care - Follow instructions for lubricating and changing accessories.
8. Check Damaged Parts - Before further use of the Lawn and Leaf Sweeper, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts,

breakage of parts, mounting, and any other condition that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by a qualified technician unless indicated elsewhere in this manual.

General Safety

1. Do not perform any maintenance, including changing lines or making repairs while the Leaf and Lawn Sweeper is moving.
2. Do not fasten the rope to a pulling vehicle where it will become entangled in wheels or other moving parts.
3. Do not use the Sweeper on streets or highways. Watch for traffic while using near roadways.
4. Do not use Lawn and Leaf Sweeper for other than intended use.
5. Maintain labels and nameplates on the Lawn and Leaf Sweeper. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
6. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS.

SPECIFICATIONS

Hopper capacity	12 Cubic Feet
Brushes	18-1/4" x 3-1/2"
Wheels	Solid rubber, all terrain tread
Net Weight	73.8 Lbs.

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

SET UP INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INSTRUCTIONS** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

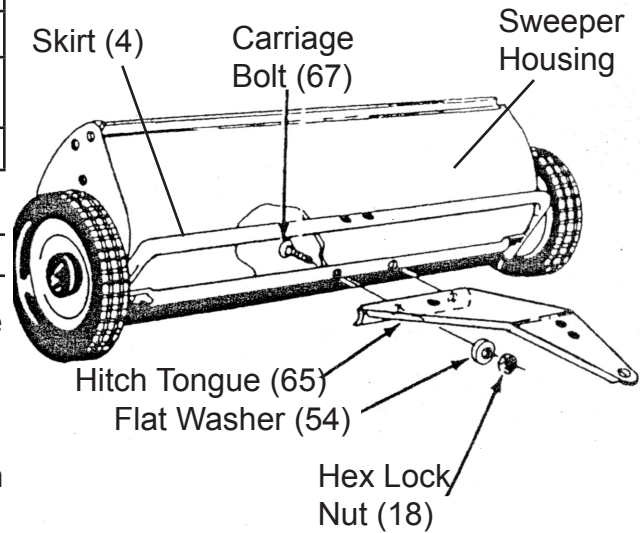
Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

Assembly

1. Due to the weight of the Lawn and Leaf Sweeper, it is recommended that an additional adult assist in assembly and set-up.
2. Assembly of the Lawn and Leaf Sweeper will require use of the following tools (not included): hex wrenches, standard screwdriver and pliers.

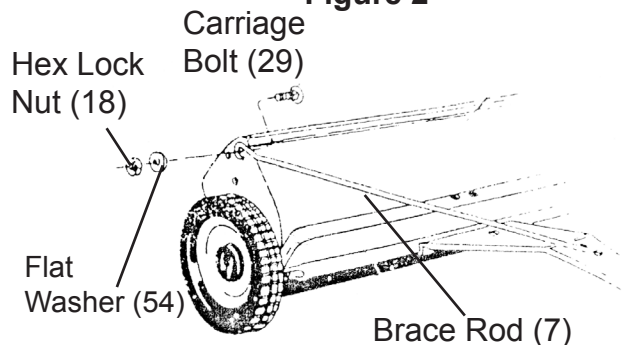
Sweeper Housing

Figure 1



1. Locate each of the 5/16" Hex lock Nuts (18) and 5/16" Flat Washers (54).
2. Secure the Hitch Tongue (65) to the Skirt (4) on the sweeper housing. Insert the 5/16" x 1-1/2" Carriage Bolts (67) inserted so that the bolt heads are on the inside of the housing. Slide on Flat Washers (54), and thread on Hex Lock Nuts (18). Hand tighten in place-see Figure 1.

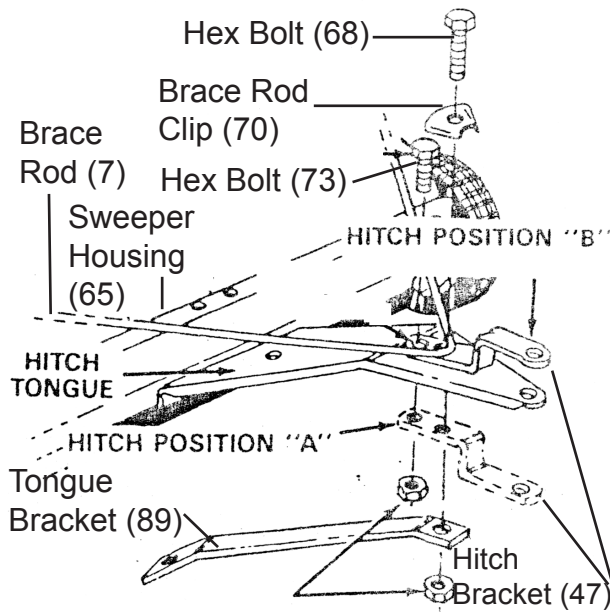
Figure 2



3. Secure the Brace Rod (7) to the Sweeper Housing. Slide in Carriage Bolt (29), and secure Brace Rod in

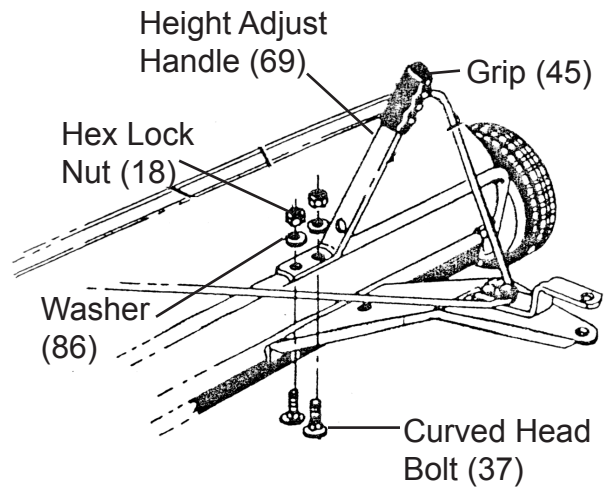
place by sliding on Flat Washer (54) and Hex Lock Nut (18)-see Figure 2.

Figure 3



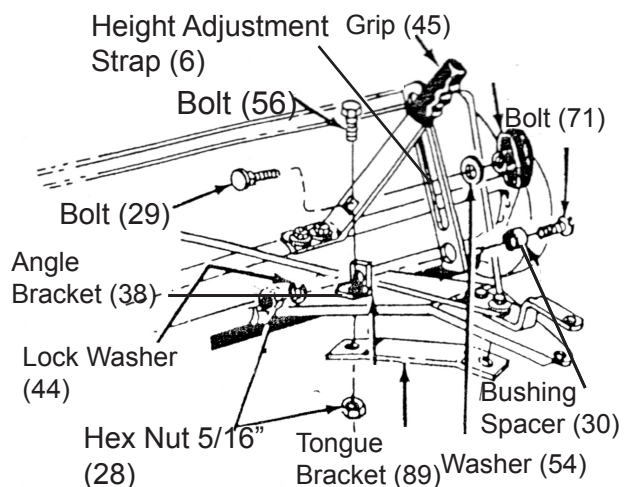
4. Before assembling the Hitch Bracket to the Hitch Tongue, see section on determining position for your towing vehicle on page 8.
5. Note: Placement of the Hitch Bracket (47) will be determined by your towing vehicle. Connect the Hitch Bracket to the Hitch Tongue with Hex Bolt (68), through Brace Rod Clip (70), onto Brace Rod (7) and down through middle hole in the Hitch Bracket (47). Continue through Hitch Tongue (65), Tongue Bracket (89) and thread on Hex Lock Nut (60)-see Figure 3 and assembly diagram.
6. Insert Hex Bolt (73) down through the rear hole of the Hitch Bracket (47), down through the Hitch Tongue (65) and secure with Hex Lock Nut (60)-see Figure 3.
7. Tighten down all hardware.

Figure 4



8. Place on Height Adjustment Handle (69) the Height Adjustment Tube (27). Insert the Curved Head Bolt (37) up through the Height Adjustment Tube (27). Slide on Washer (86), and secure with Lock Nut (18). Repeat for second hole-see Figure 4.
9. Slide Grip (45) onto Height Adjustment Handle (69) so that the indentations for fingers face as shown in Figure 4.

Figure 5

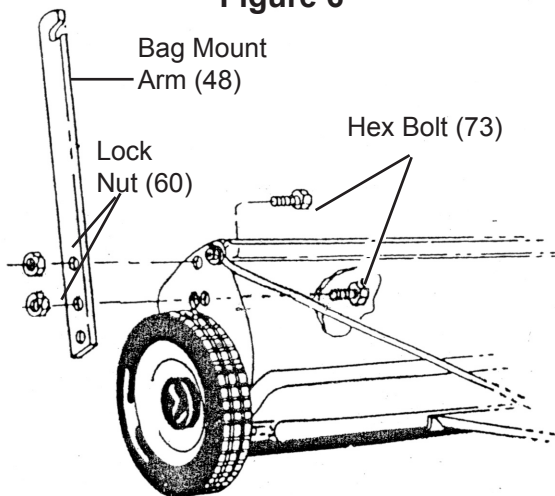


10. Attach the Angle Bracket (38) to the Hitch Tongue (65) as shown. Secure

using Bolt (29) and Lock Nut (54)-see Figure 5.

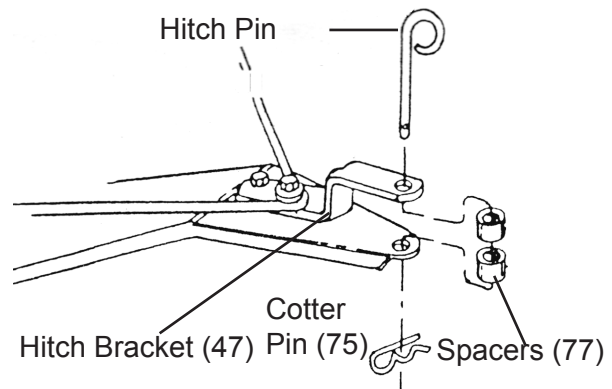
11. Secure the round hole end of the Height Adjustment Strap (6) to the Angle Bracket (38). Place a Bushing Spacer (30) over the end of the Slot Head Bolt (71) and into the hole in the Adjustment Strap (6)-see Figure 5 and Assembly Diagram. Secure with Lock Washer (44) and Hex Nut (28).
12. Finish securing Height Adjustment Strap (6) to Height Adjustment Handle. Place the slot on the Height Adjustment Strap in line with the square hole. Secure in place with Carriage Bolt (29), Washer (54) and Knob (5).

Figure 6



13. Attach both Bag Mount Arms (48) to the outside of the housing with Hex Bolts (73) and Lock Nut (60). Note that the notches in the Bag Mount Arms (48) must face upward and Bag Mount Arms must be attached to the outside of the housing-see Figure 6.

Figure 7

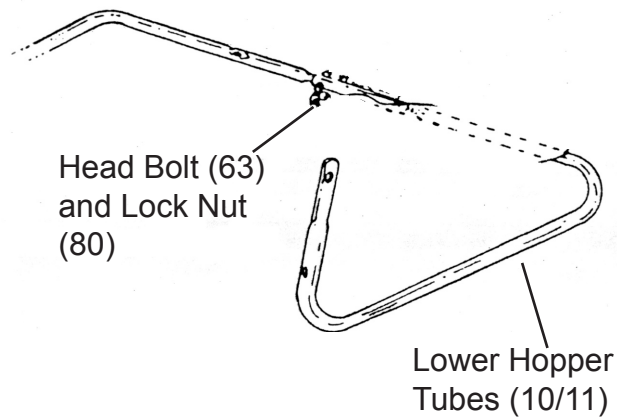


14. Insert two Spacers (77) between Hitch Bracket (47) and Hitch Tongue (65). Insert Hitch Pin (76) down through the Hitch Bracket, Spacers (77) and through Hitch Tongue (65). Secure with Cotter Pin (75)-see Figure 7.

Hopper Bag Assembly

1. Starting at the center cut in the top of the Hopper Bag (12), insert the Left Hand Upper Hopper Tube (9) through the hopper bag stitched tubes. Repeat for the Right Hand Upper Hopper Tube (8).
2. Slide the two Upper Hopper Tubes (8/9) together. Make certain that the center holes line up perfectly. Secure in place with Curved Head Bolt (63) and Hex Lock Nut (80) as shown in assembly diagram.

Figure 8

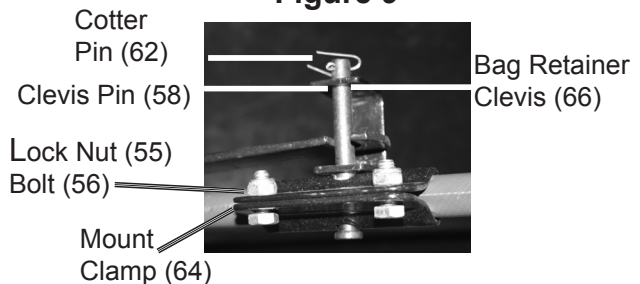


3. Attach the two Lower Hopper Tubes as shown in Figure 8. Secure in place with Curved Head Bolt (63) and Hex Lock Nut (80) as shown in assembly diagram.
4. Set the assembled Lower Hopper Tubes (10/11) onto the bottom of the Hopper Bag (12).
5. Secure the Upper and Lower Hopper Tube ends together with two Hex Bolts (61) and Hex Lock Nut (57). Do not overtighten.
6. Assemble the Bag Frame Strap (49) and Skirt Retainer (43) to the front edge of the bag bottom. Set the Skirt Retainer (43) on top and the Frame Strap (49). Secure with six Screws (52) and Lock Nuts (53).
7. Attach the Bag Frame Strap (49) to the lower hopper frame. Secure with Hex Bolt (61) and Lock Nut (57).
8. Set the bag corners over the lower hopper tube. Snap the bag bottoms closed with snaps on bag.
9. Note: Hopper Support Rods are steel and require force to bend or bow. Exercise caution and do not over bend

as this will cause a loss of necessary tension. Set each of the two Hopper Support Rods (50) by placing the top end of each rod into the hole in the Upper tube. Bend the Hopper Support Rod outward and snap the bottom end of the Hopper Support Rod (50) into the hole in the Lower Hopper Tube (11).

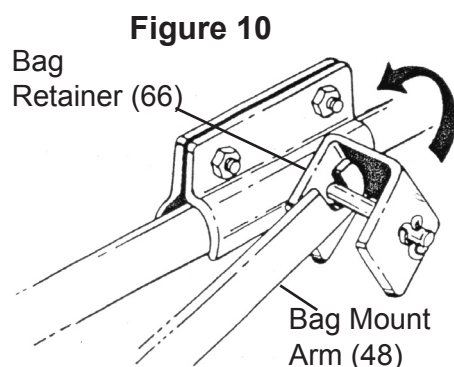
10. Locate the hole along the side of the Upper Hopper Tubes. Align the Hopper Bag (12) with the hole in the Upper Hopper Tube. Pierce a hole through the Hopper Bag at the point it is aligned with the Upper Hopper Tube.

Figure 9



11. Secure the Mount Clamps (64) to each side of the Upper Hopper Tubes (9). Place one Clevis Pin (58) through the Mount Clamps (64), the Hopper Bag and the Upper Hopper Tubes (9). Secure with Hex Bolts (56) and Lock Nuts (55)-see Figure 9. Repeat for second side.
12. Secure the Bag Retainers with Clevis Pins (58) and Cotter Pin (62). Wrap Cotter Pin around Clevis Pin as shown in Figure 9.
13. Secure the Rope (78) to the top center of the Hopper Bag Frame.
14. Secure the Wind Screen (31) to the Upper Hopper Tube (9). Stretch out all four corner loops and snap into

place. Wrap the rear loops around the Upper Hopper Tube for a secure fit.

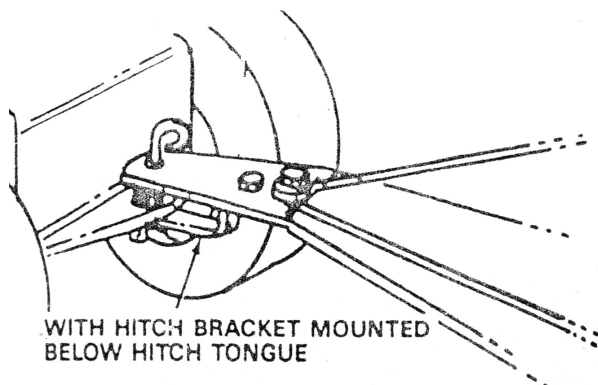


15. Secure the Hopper Bag Frame (12) to the Sweeper by hooking the Clevis Pins into the notches in the Mount Arms-see Figure 10.
16. To remove the Hopper Bag Frame from the Sweeper, flip the Bag Retainers up and remove the Bag-see Figure 10.

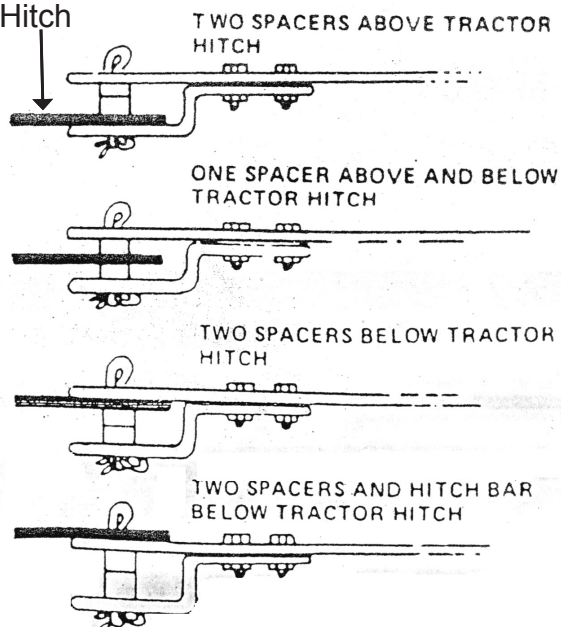
Adjusting Lawn Sweeper to the Towing Vehicle

1. The Sweeper must be secured to the towing vehicle so that the bottom of the Bag Frame (12) is approximately level when on a flat surface. The Bag Frame must be off the ground 3" to 4". Do not allow the Bag Frame to drag on the ground.
2. Remove the Bag for storage.
3. Adjust Spacers (77) and Hitch Bracket (47) according to the diagram on page 9. The black line represents the tractor hitch.

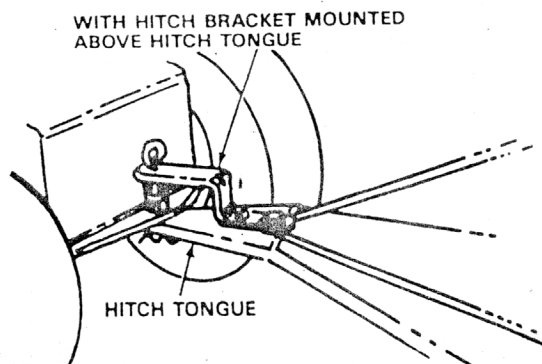
Riding Mowers with 8" to 10-1/2" Ground Clearance to Hitch



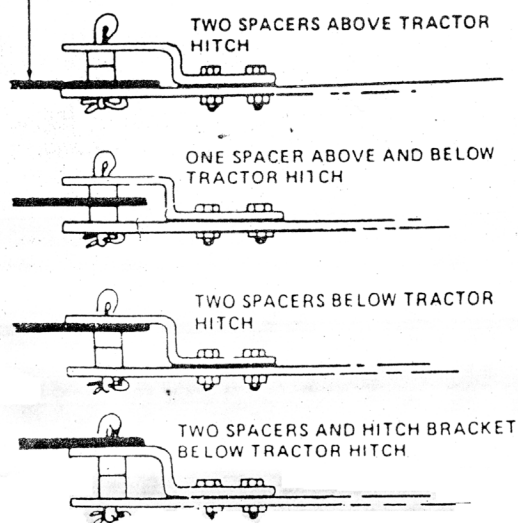
Tractor Hitch



Tractors with 10-1/2" to 13" Ground Clearance to Hitch



BLACK LINE IS TRACTOR HITCH



1.

OPERATING INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Brush Height Adjustment

1. To adjust Sweeper brushes to the best height, loosen the Height Adjustment Knob (5) and push down on the Height Adjustment Handle (69) to raise. For best performance, adjust the brushes so that they set 1/2" down into the grass.

Dumping the Sweeper

1. The Sweeper can be dumped easily without getting off of the rider or tractor. Pull the rope forward to dump.
2. Always dump the Sweeper after each use. Damp or wet grass and leaves will cause damage to hopper if stored for long periods of time.

MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

!WARNING

TO PREVENT SERIOUS INJURY

FROM TOOL FAILURE:
Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning, Maintenance, and Lubrication

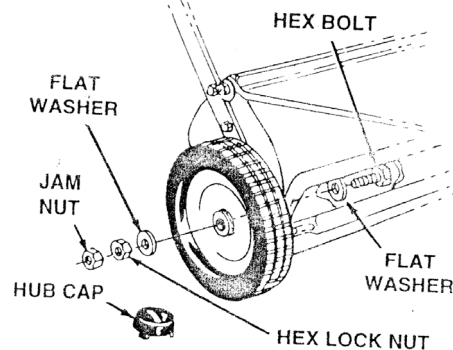
1. **BEFORE EACH USE**, inspect the general condition of the Lawn and Leaf Sweeper. Check for loose screws, misalignment or binding of moving parts, cracked or broken

parts, damaged and any other condition that may affect its safe operation.

2. Add a few drops of light machine oil to the brush shaft bearings twice a year.
3. Remove wheels to clean gears every two years. After cleaning, apply an even coat of light grease. Do not overtighten wheel bolt and nut upon reassembly. Wheel must be free to move in slot with height adjustment.

Removing Wheel

Figure 11

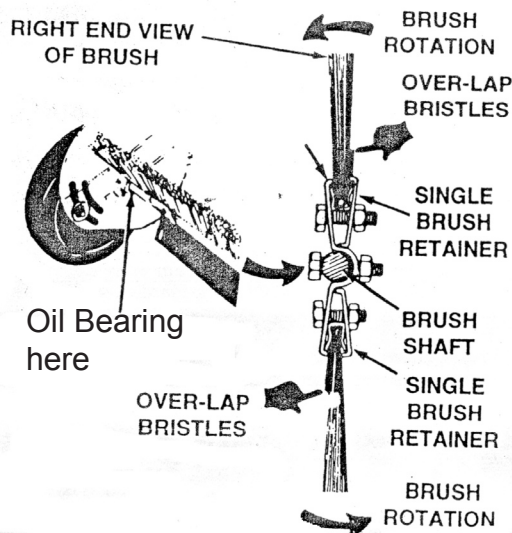


1. Pop off Hub Cap (90) with a screw driver (not included). Remove Jam Nut (18), Hex Lock Nut and Washer (19)-see figure 11.
2. When servicing Wheel gears, do not remove both wheels at once. Remove one wheel at a time to prevent use of left-hand parts on right-hand side.
3. Make note of all washers and rings.
4. The Drive Pin is located inside of the ratchet gear. When reassembling the ratchet gear and pin, fill the inside of the gear with grease. Reassemble the wheel and rotate it in both directions. The wheel should drive the brushes only when turned in the for-

ward direction. If the brushes move in both directions, then the Drive Pin is jamming inside the Ratchet Gear. Make certain that the gear is clean and greased adequately.

Replacing Brushes

Figure 12



1. Replace Brushes one at a time to avoid misplacing right and left-hand side gearing.
2. Remove the Hopper Bag (12).
3. Tip the Sweeper back on its housing. Do not remove Hex Bolts which fasten the Double Brush Retainers (40) to the Brush Shaft (39).
4. Loosen the Hex Bolts (73) and Hex Lock Nuts (60). Slide the Brush out of the retainers, making note of the position of the bristles-see Figure 12.
5. Install new Brush, making certain overlapping bristles are positioned the same as before.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Record Product's Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

Part	Q'ty	Description	Part	Q'ty	Description
1	4	Brush	29	3	Carriage Bolt M8x20
2	1	Pinion Gear-R.H.	30	1	Bushing Spacer
3	1	Pinion Gear-L.H.	31	1	Windscreen
4	1	Skirt	32	2	Brush Shaft Bushing
5	1	Height Adj. Knob	33	1	Rear Support Brace
6	1	Height Adj. Strap	34	1	Wrapper
7	1	Brace Rod	35	2	Dust Cover Assy
8	1	Upper Hopper Tube R.H.	36	8	Hex Bolt M6x20
9	1	Upper Hopper Tube L.H.	37	2	Curved Hd. Bolt M8x40
10	1	Lower Hopper Tube R.H.	38	1	Angle Bracket
11	1	Lower Hopper Tube L.H.	39	1	Brush Shaft
12	1	Hopper Bag	40	4	Brush Retainer (double)
13	16	Pop Rivet	41	8	Brush Retainer (single)
14	2	Bearing Retainer	42	2	Wheel Assembly
15	4	Retaining Ring	43	1	Skirt Retainer
16	6	Flat Washer	44	1	Lock Washer Ø8 I.D.
17	4	Hex Bolt M8x20	45	1	Grip
18	9	Hex Lock Nut M8	46	2	Hub Cap
19	2	Flat Washer	47	1	Hitch Bracket
20	2	Flat Washer Ø10xØ26	48	2	Bag Mount Arm
21	2	Washer Ø10	49	1	Bag Frame Strap
22	2	Hex Bolt	50	2	Hopper Support Rod
23	2	Jam Nut	51	2	Dowel Pin
24	4	Hex Bolt M6x25	52	6	Truss Hd. Slotted Screw M5x15
25	16	Hex Lock Nut M6	53	6	Hex Lock Nut M5
26	2	Hex Lock Nut M10	54	6	Flat Washer Ø8
27	1	Height Adj Tube	55	4	Hex Lock Nut M8
28	1	Hex Nut M8	56	5	Hex Bolt M8x20

Part	Q'ty	Description	Part	Q'ty	Description
57	2	Hex Lock Nut M6	76	1	Hitch Pin
58	2	Clevis Pin Ø10x80	77	2	Spacer
59	2	Hex Bolt M10x20	78	1	Hopper Rope
60	8	Hex Lock Nut M10	79	2	Flat Washer
61	2	Hex Bolt M6x35	80	2	Hex Lock Nut
62	2	Cotter Pin Ø3x20	81	2	Flat Washer
63	2	Curved Hd. Bolt M6x25	82	4	Hex Bolt M8x15
64	4	Hopper Mount Clamp	83	1	End Plate L.H.
65	1	Hitch Tongue	84	1	End Plate R.H.
66	2	Bag Retainer Clevis	85	1	Hitch Tube
67	2	Carriage Bolt M8x40	86	1	Bowed Washer
68	1	Hex Bolt M10x40	87	2	Spacer
69	1	Height Adj. Handle	88	2	Spacer
70	1	Clip Brace Rod	89	1	Tongue Bracket
71	1	Sl. Truss Hd. Bolt M8x25	90	4	Wheel Bearing
72	2	Carriage Bolt M6x16	91	2	Washer, Special
73	5	Hex Bolt M10x20	92	2	Washer Ø16
74	2	Hex Bolt M6x12			
75	1	Hairpin Cotter Ø4			

ASSEMBLY DIAGRAM

